CLAIMS

1. A locking mechanism for controlling engagement between parts movable relative to one another in medical sharp devices, the mechanism comprising: a retainer part for retaining a medical sharp, the retainer part having a fixed formation which is engageable with a second formation located on a body part of a medical sharp device and a connector part which is movable relative to the body part to a position in which the connector part and retainer part are in a mutually engaged configuration, wherein the connector part, during movement to the engaged configuration, is adapted to alter the relative engagement between the first and second formations to enable release of the retainer part from the body part.

2. A locking mechanism as claimed in claim 1 in which the first formation and second formation comprise a lug and a recess, each being formed on or in one of the retainer part and the body part.

3. A locking mechanism as claimed in claim 2 in which a pair of said lugs are provided on opposite sides of the retainer part and in which the recess comprises an internal annular recess in the body part.

4. A locking mechanism as claimed in any preceding claim in which the retainer part includes a flexible leg, the first formation being located on the leg, the connector part being adapted to flex the leg, on engagement with the retainer part, to move the first formation relative to the body part.

5. A locking mechanism as claimed in claim 4 when dependent upon

claim 3 in which the retainer part includes two said legs, the connector part being adapted to move the legs towards one another on engagement with the retainer part.

6. A locking mechanism as claimed in claim 5 in which the legs are mutually joined at respective ends thereof.

7. A locking mechanism as claimed in claim 6 in which the legs form a diamond shape.

8. A locking mechanism as claimed in any one of claims 4 to 7 in which each leg has an inner surface and an outer surface, the outer surface being longer than the inner surface.

9. A locking mechanism as claimed in claim 8 in which the inner surface is relatively flat and the outer surface is outwardly concave or relatively curved compared to the inner surface.

10. A locking mechanism as claimed in any preceding claim in which the connector part includes a bore into which at least part of the retainer part is insertable.

11. A locking mechanism as claimed in claim 10 in which the bore includes an annular ledge at an entrance thereto, and in which the retainer part includes at least one connector protrusion for engagement behind the annular ledge.

12. A locking mechanism as claimed in claim 11 in which two said connector protrusions are provided, the connector protrusions being adapted to engage the annular ledge asymmetrically.

13. A locking mechanism as claimed in claim 12 in which each connector protrusion has a chamfered surface for riding over the annular ledge and an opposing step surface for engagement behind the ledge.

14. A locking mechanism as claimed in any preceding claim in which the retainer part is adapted to retain a hypodermic needle, the retainer part including an elongate bore passing therethrough, the bore being engageable with a cylindrical outer surface of a needle.

15. A locking mechanism as claimed in claim 14 in which the elongate bore includes internal ribs for sealingly gripping a needle.

16. A locking mechanism for a medical device comprising a retainer part for retaining medical sharp devices, the retainer part including at least one connector portion thereof adapted for engagement against a body part of a medical sharp device, and a connector part, the connector part being adapted for movement to engage the connector portion for connection therewith, movement of the connector part once connected to the connector portion causing movement of the retainer part.

17. A locking mechanism as claimed in claim 16 in which the connector portion comprises a flexible leg.

18. A locking mechanism as claimed in claim 17 in which two said flexible legs are provided extending generally parallel to one another, engagement of the connector part with the legs causing the legs to move towards one another.

19. A locking mechanism as claimed in claim 18 in which the legs are joined together in a diamond shape.

20. A locking mechanism as claimed in any one of claims 17 to 19 in which each said leg includes a lug adapted for engagement with a recess formed in the body part, the movement of the connector part to engage the leg causing a reduction in the force of engagement between the lug and recess.

21. A locking mechanism as claimed in any one of claims 17 to 20 in which the connector part includes a generally cylindrically bore, the bore being adapted to receive each said leg on engagement of the connector part therewith.

22. A locking mechanism as claimed in claim 21 in which the bore includes an annular ledge at an entrance thereto and each said leg includes a connector projection adapted to ride over and lock past the ledge on insertion to the bore.

23. A hypodermic needle assembly comprising a generally cylindrical needle and a retainer for the needle, the retainer having an elongate bore formed therethrough, the needle being a push-fit in the bore for sealing

engagement therein.

24. A hypodermic needle assembly as claimed in claim 23 in which the bore includes a series of ribs for sealingly engaging an outer surface of the needle.

25. An assembly as claimed in claim 24 in which the ribs are circumferentially extending ribs.

26. A hypodermic needle assembly comprising a fluid container for sealably maintaining fluid therein, the container having a main body connected at one end thereof via a shoulder to a generally cylindrical neck portion having an open front end, and a needle retainer assembly comprising a needle retainer and a needle, the needle retainer being removably insertable through the open front end of the neck portion into the neck portion of the fluid container.

27. An assembly as claimed in claim 26 in which the fluid container comprises a generally cylindrical barrel.

28. An assembly as claimed in claim 26 or claim 27 in which the needle retainer has a cylindrical body and has a bore formed therealong, the bore having an entrance thereto, the needle retainer being insertable into the neck portion to a position in which the entrance to the bore is located spaced at least partly along the neck portion from the open front end thereof to the shoulder.

29. An assembly as claimed in claim 28 in which the needle portion is insertable into the neck portion into a position in which the entrance to the bore is axially located about 50% to 100% (e.g. about 75% or more) of the way along the neck portion from the open end to the shoulder thereof.

30. An assembly as claimed in any one of claims 28 to 29 in which the needle retainer and neck portion are circularly cylindrical, and in which an outer diameter of the needle retainer is substantially equal to an inner diameter of the neck portion.

31. An assembly as claimed in any one of claims 26 to 30 in which the fluid container is formed with an annular internal recess at the axial point at which the neck portion meets the shoulder portion thereof, and in which the needle retainer includes at least one projection adapted to engage with the recess for retaining the needle retainer in position in the fluid container.

32. An assembly as claimed in claim 31 in which the projection is releasable from the recess for enabling movement of the needle assembly along the fluid containers.

33. An assembly as claimed in any one of claims 26 to 32 in which a seal is provided on the needle retainer for sealing with the internal surface of the neck portion.

34. An assembly as claimed in claim 33 in which the needle retainer has a cylindrical body having a front end from which the needle projects and a rear end, the seal being located adjacent the rear end.

35. An assembly as claimed in any one of claims 26 to 34 in which the needle has a sharp front end, and a rear end, the rear end being adjacent a rear end of a cylindrical body of the needle retainer.

36. An assembly as claimed in any one of claims 26 to 35 which includes means for forcing fluid out of the container and along the needle.

37. A medical device including a needle assembly as claimed in any one of claims 16 to 36.

38. A medical device including a locking mechanism as claimed in any one of claims 1 to 25.

39. A medical device as claimed in claim 38 which comprises a hypodermic needle device.

40. A medical device as claimed in claim 39 which comprises a butterfly.

41. A medical device as claimed in claim 39 which comprises a catheter.

42. A medical device as claimed in claim 39 which comprises a hypodermic syringe and in which the retainer part is adapted to retain a hypodermic needle of the device and the connector part is mounted on a plunger of the syringe.

43. A medical device as claimed in claim 42 in which the syringe has an

eccentrically located neck portion and the connector part is located in a corresponding eccentric located on the plunger.

44. A medical device as claimed in claim 43 in which means are provided for preventing rotation of the plunger in a barrel portion of the syringe.

45. A medical device as claimed in claim 42 or 43 or 44 in which the syringe includes a barrel, a conical shoulder portion at a forward end of a main cylindrical part of the barrel and a neck portion in front of the shoulder portion, the said second formation of the locking mechanism being formed internally in the neck portion.

46. A medical device as claimed in claim 45 in which the neck portion of the barrel includes a front end and a rear end, the rear end being adjacent a front end of the shoulder portion, the second formation comprising an annular internal recess formed at the rear end of the neck portion.

47. A medical device as claimed in any one of claims 38 to 45 in which the retainer part is removably mounted on the body part of the device.

48. A medical device as claimed in claim 47 when dependent upon claim 25 which includes a hub part for releasably sealably retaining the retainer part on the barrel of the syringe.

49. A medical device as claimed in claim 48 in which the hub includes a stop surface for preventing forward movement of the retainer part relative to the barrel.

50. A locking mechanism substantially as described herein with reference to the accompanying drawings.

51. A hypodermic needle assembly substantially as described herein with reference to the accompanying drawings.

52. A medical device substantially as described herein with reference to the accompanying drawings.

53. A syringe device having a barrel portion, a plunger located in the barrel, the barrel portion having an eccentrically located neck at one end thereof, and means provided for preventing rotation of the plunger in the barrel.

54. A device as claimed in claim 53 in which the means for preventing rotation comprise the barrel having a non-circular cross section and the plunger has a corresponding cross section.

55. A device as claimed in claim 54 in which the barrel has a elliptical cross section.

56. A device as claimed in any one of claims 53 to 55 in which the plunger has a stem with an X-shaped section and the barrel is formed with a groove allowing axial movement but preventing rotation of the plunger stem.